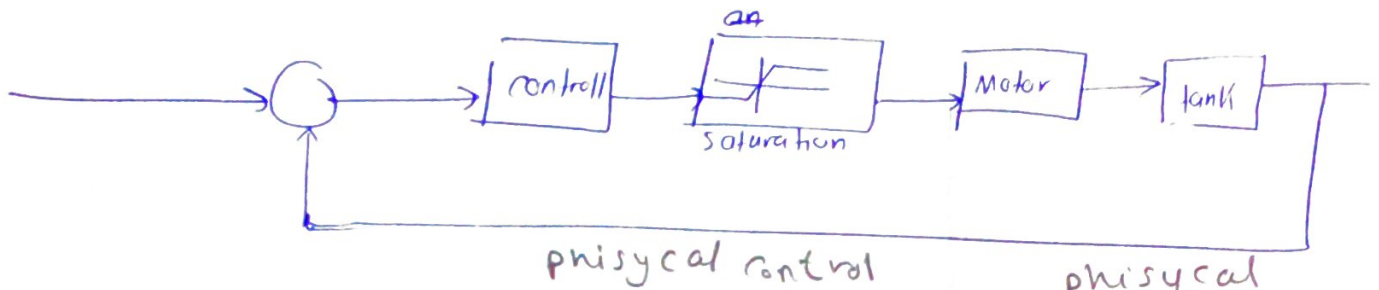
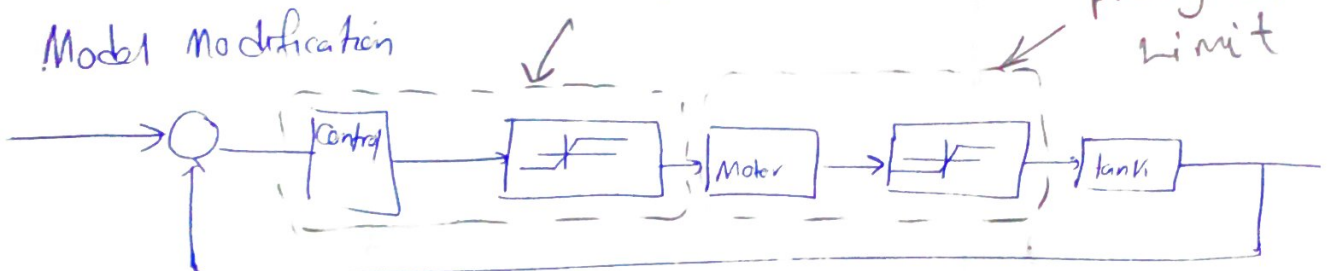


The 1st source of Nonlinearity is Saturation.

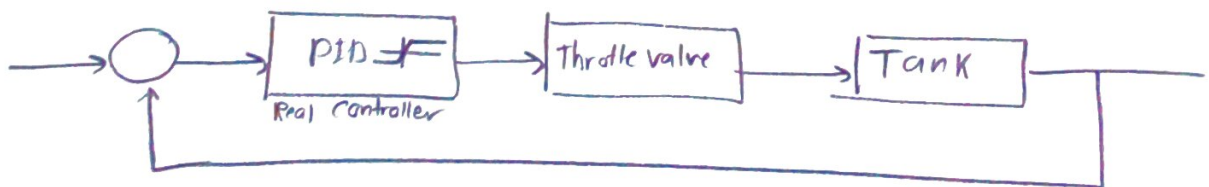
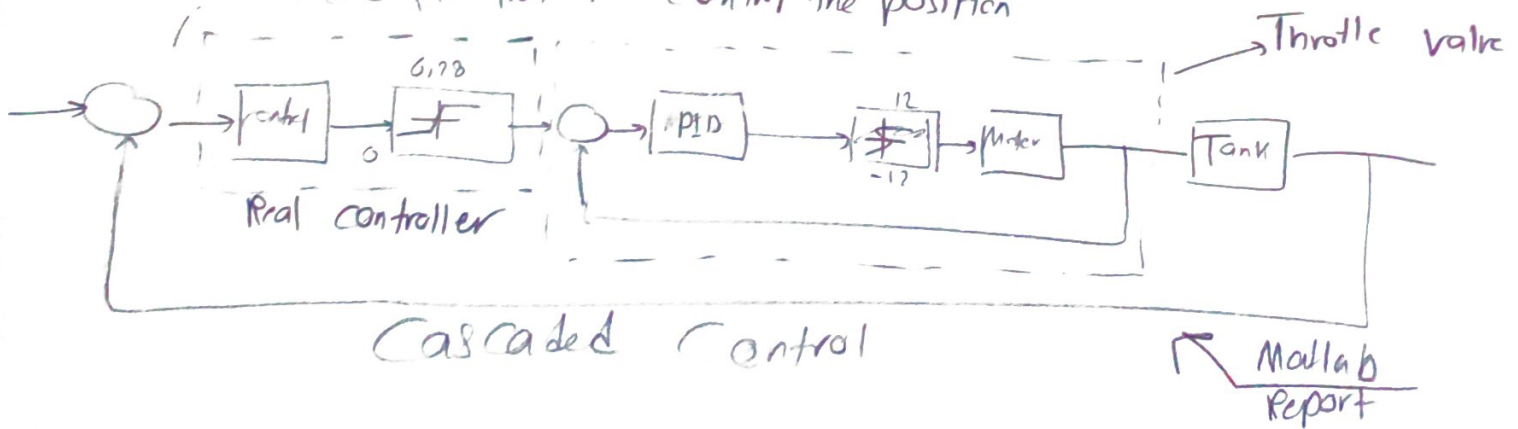
Model Modification



Model Modification



Model Modification to control the position



Derivative Kick

noise: $a_n \sin(\omega_n t)$
 $a_n \downarrow$
 $\omega_n \uparrow$

$\frac{d}{dt}$: $\boxed{a_n \omega_n} \cos \omega_n t$ \rightarrow low pass filter 1



اگر خروجی تفاضل از output و آفد feedback
 output نام

Integral windup

